

**GOVERNMENT OF INDIA
RAILWAYS
LOK SABHA**

UNSTARRED QUESTION NO:3106

ANSWERED ON:06.12.2007

ANTI-FOG EQUIPMENTS AND MACHINES FOR TRAINS

Murmu Shri Hemlal

Will the Minister of RAILWAYS be pleased to state:

(a) the details of works done by Indian Railways in the field of Research and Development during the last three years and the current year as on date alongwith the funds spent on it by the Railways, zone-wise;

(b) whether the Government have conducted any research work to find out new techniques to check delay in operation of trains ordinarily and due to fog; and

(c) if so, the full details thereof?

Answer

MINISTER OF STATE IN THE MINISTRY OF RAILWAYS (SHRI R. VELU)

(a) to (c): A Statement is attached.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF UNSTARRED QUESTION NO.3106 BY SHRI HEMLAL MURMU TO BE ANSWERED IN LOK SABHA ON 06.12.2007 REGARDING ANTI-FOG EQUIPMENTS AND MACHINES FOR TRAINS

(a) The Research and Development work of Railways is carried out by Research Design and Standards Organisation (RDSO), Lucknow under the Ministry of Railways. Some of the noteworthy works undertaken by RDSO in the last three years are given below:-

Safety:- Oscillation Monitoring System (OMS), Wheel Impact Load Detection(WILD) System. Satellite Imaging for Rail Navigation (SIMRAN).

Bridge and Track:- Condition Assessment of Bridges using Vibration Signature Analysis; Continuous Scour Monitoring of Bridge Pier/Abutment Foundation using Time Domain Reflectometry, Development of the State of art Alumino-Thermic rail welding technology, Sleeper for 32.5t axle load.

Coaches:- Development of Crashworthy Design of Coaches, Coach Design with enhanced berth capacity, Fire Retardant Coaches, Design and development of Head on Generation (HOG) system for hotel load of the train.

Wagons:- Design of BOXN 25 wagon of 25t axle load, Design of BOY 25 wagon of 25t axle load, Design of BRN 25 wagon of 25t axle load, Design of BOBRN25 wagon of 25t axle load, Double Stack Container operation with 22t axle load at speed of 100 kmph in loaded condition.

Locomotives:- Upgrading of EMD engine from 4000 to 4500 hp, Development of alternative sources for Unit Injectors of EMD Diesel Engine, Upgradation of 12 cylinder ALCO/DLW Diesel Engine from 2300 to 2700/3000 hp, Development of High Torque Three Phase Traction Motors for WAG9/WAP7 Class of Locomotives. The funds spent on the Research and Development projects and the related establishment during the last three years and the current year by RDSO are as under:-

Year Actual Expenditure
(Figures in Crores of Rs.)

2004-05	70.85
2005-06	6.53
2006-07	96.28
2007-08 (upto Sept. '2007)	38.52

The Research and Development work of Indian Railways is not carried out in the Zonal Railways and as such no fund allocation is made to the Zones for this purpose.

(b) "Fog Vision Instrumentation" project under the "Technology Mission on Railway Safety" is being executed jointly by Indian Institute of Technology (IIT), Kanpur (Coordinator), Research Design and Standards Organisation (RDSO) and industry partners.

(c) The aim of the 'Fog Vision Instrumentation' project is to develop instruments based on laser technology to help the drivers to run trains at normal speed in foggy weather. The outlay for this research project is Rs.3 Crores.